Shyam Sivasubramanian

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Education

Purdue University, *B.S. Computer Science and Data Science* Aug 2023 – May 2027
West Lafayette, IN

Skills

Programming Languages: Java, R, Python, C, C++, Assembly, SQL, GLSL, HTML, CSS, JavaScript
Tools & Libraries: Mediapipe, SciKit Learn, OpenCV, Pandas, Numpy, Virtual Reality, Plotnine, Statsmodels, Stable Baselines 3, Pytorch, Git, CLI, Linux, Robot Operating System, OpenGL,

Work Experience

Purdue CoMMA Lab, *Researcher* Aug 2024 – present
- Created and deployed scripts on robot manipulators to detect and avoid collisions in real time with computer vision.
- Worked with Virtual Reality (VR) technology to control robot manipulators while integrated collision detection is active
- Currently improving Foam: an automated mesh simplification tool which allows for faster computation when working with robot manipulators.

Karyon.bio, *Data science Intern* May 2025 – Aug 2025
- Created classification models using Pandas and statsmodels to aid in predicting the likliness of fatty liver disease and diabetes of a certain patient.
- Created gaphs using plotnine to visualize the performance of models and the likeliness of a patient to have fatty liver disease

Web Developer, *The Purdue Rivet* Feb 2025 – Jun 2025
- Used HTML, CSS, and JavaScript to create a website for the Purdue Rivet, a student run publication

Staff Photographer, Graphics Artist, *The Purdue Exponent* Aug 2023 – present
- Photographed and created art to add context to news stories published on Purdue's student run newspaper

The Robotics Institute, Carnegie Mellon University, *Research Assistant* Jun 2022 – Aug 2022
- Developed test scripts for reinforcement learning research in robotics
- Conducted robot simulations to validate and improve algorithm performance.

Biohaven Pharmaceuticals, *Intern* Jun 2022 – Aug 2022
- Analyzed clinical trial data for upcoming neurological drugs using the R programming language, ensuring accurate interpretation and reporting.
- Assisted with technical issues in data collection and corruption

Notable Projects

Minesweeper Auto Solver Jul 2025
- Created Minesweeper puzzles and attemts to solve them
- Puzzles are solved using algorithmic thinking via a hierarchy of reasoning
- Emoloyed HTML/CSS and JavaScript

DeepRow May 2023
- Quantified the rowing form of a user using computer vision
- Trained model on data collected via pose estimation from professional athletes and then classified via a Random Forest Classifier
- Employed Python libraries such as Scikit Learn, Numpy, OpenCV, and MediaPipe.

Shader Study Jun 2024
- Created mathematically generative art pieces while learning more about computer graphics, multivariable calculus, and animation.
- Employed GLSL and OpenGL